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EXAMINER	
MCCUE, BRITTANY N	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,028	SANDE ET AL.	
	Examiner	Art Unit	
	Brittany N. McCue	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

The amendments were received on 4-10-09. Claims 1-15 and 17-32 are pending in the application. Applicants' arguments have been carefully and respectfully considered. Claims 1, 2, 6, 7, 12-15, 17-19, 21-23, and 27-32 are rejected under 35 U.S.C. 103 over Bashant et al. (US 6,636,875) of record and further in view of Russell et al. (US 2004/0260404) and Applicants Admitted Prior Art, Technical Background, pages 1-4 (referred to herein as AAPA), claims 3-5, 8-10, 20, and 24-26 are rejected under 35 U.S.C. 103 over Bashant in view of Russell and AAPA and further in view of A. DeVos et al., *XML for CIM Model Exchange*, IEEE, 2001 (referred to herein as DeVos) of record, and claim 11 is rejected under 35 U.S.C. 103 over Bashant in view of Russell and AAPA and further in view of Hamsa (US 6,564,201) of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 6, 7, 12-15, 17-19, 21-23, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashant et al. (US 6,636,875) and further in

view of Russell et al. (US 2004/0260404) and Applicants Admitted Prior Art, Technical Background, pages 1-4 (referred to herein as AAPA).

With respect to claim 1, Bashant teaches a method for retrieving and accessing data stored in a plurality of systems arranged for operating part of one or more electrical power networks, the method comprising:

adding a new object (Bashant, Col. 10 Li. 25-31, upon creation of a new data element in a storage system, the hub system must be informed through an instruction to the hub system) and data related to the new object into a first system (Bashant, Col. 10 Li. 31-39, the instruction relating to the new element may include a header containing information relating to the new element & Col. 10 Li. 42-45, the header information is inputted into the table),

adding a copy of the new object into a plurality of relevant systems (Bashant, Col. 10 Li. 40-49, the hub system, upon receiving an instruction to create, would create a new universal identifier for the data element and a new entry in the table & Col. 10 Li. 50-53, the instruction relating to the new element is then forwarded to other storage systems),

establishing automatically a connection between said relevant systems and the new object (Bashant, Col. 10 Li. 40-63, a new universal identifier is created in the hub system and can also be created on each storage system and each storage system must inform the hub system of how the data element is stored),

replicating data related to the new object from the new object to other systems and relevant systems (Bashant, Col. 10 Li. 50-52, the instruction relating to the new element is forwarded to storage systems for replication, this instruction may include the universal identifier and a data element type name of the new element),

establishing a consistency of accessed or retrieved data in the relevant systems by mapping the new object using a model based on a structured text document (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10, the headers of the instructions provide the hub system with information to facilitate mapping between identifiers of separate storage systems and are in XML format),

checking a consistency of attributes of the accessed or retrieved data by identifying the new or a given object and/or copies of the new or a given object and comparing attributes of all copies of the same new or given object (Bashant, Col. 10 Li. 65-67 – Col. 11 Li. 1-6, when an existing data element is modified or referenced, the hub system is informed so that the other systems can be synchronized).

Bashant doesn't expressly discuss requesting data relating to a target object included in one of the systems, identifying relevant systems including data relating to the target object, and retrieving the data regarding the target object from identified relevant systems. However, it is clear that other systems may wish to access data within the system of Bashant.

Bashant and Russell are directed towards managing data that is maintained in multiple databases.

Russell teaches requesting data relating to a target object included in one of the systems (Russell, paragraph 0036 & 0045, the SCADA software serves as a middle point between the user and the systems by requesting information from the devices),

identifying relevant systems including data relating to the target object (Russell, paragraph 0045, the user may request certain data from a device and the SCADA system must retrieve it, therefore the SCADA system needs to identify what the user requested so it can be retrieved), and

retrieving the data regarding the target object from identified relevant systems (Russell, paragraph 0045, the Web page the user requested is retrieved from the device itself by the SCADA software).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant to have included requesting data relating to a target object included in one of the systems, identifying relevant systems including data relating to the target object, and retrieving the data regarding the target object from identified relevant systems because it eliminates the need for the SCADA software to track all the internal states of every device (Russell, paragraph 0045).

Bashant in view of Russell discusses mapping a data element based on a structured text document (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10), however, doesn't expressly using a model based on a structured text document.

Applicant's specification admits prior methods using a model based on a structured text document for document exchange (AAPA, Technical Background, Pg. 3

Li. 8-21, a common approach to document exchange and conversion, CIM, Common Information Model, has been developed around the use of XML based formats).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell to have included using a model based on a structured text document because it greatly facilitates the exchange and automatic conversion of documents produced by one supplier of a part of the network or an equipment for the network so that a second supplier can receive, handle, and re-use the technical data from the original documents without manual intervention, editing, or re-inputting (AAPA, Technical Background, Pg. 3 Li. 15-21).

With respect to claim 2, Bashant in view of Russell and AAPA teaches the method according to claim 1, further comprising:

maintaining object connections for the new object and for any other object accessed, retrieved and/or stored (Bashant, Col. 8 Li. 37-44, the accurate maintenance of the table allows a data element to be treated or referenced by one storage system and then synchronized with other storage systems) by a SCADA system (Russell, paragraph 0024, SCADA system builds a spatial display of the devices and associated equipment and their interconnections).

Bashant in view of Russell doesn't expressly discuss any system from the list of: GIS system, ERP system, CMMS system, PM system, WO system, WMS system.

AAPA discusses that electronic power distribution networks typically comprise many and various types of distribution equipment such as a Network Information System (NIS or GIS), an Enterprise Resource Planning system (ERP), and Supervisory Control and Data Acquisition system (SCADA) (AAPA, Technical Background, Pg. 1).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell to have included any system from the list of: GIS system, ERP system, CMMS system, PM system, WO system, WMS system because the GIS system provides information about the geographical location of devices and the ERP system provides information about the maintenance history of the devices and SCADA system (AAPA, Technical Background, Pg. 1).

With respect to claim 6, Bashant in view of Russell and AAPA teaches the method according to claim 1, further comprising:

mapping the new object utilizing a virtual asset register dependent on the CIM/XML layer and/or mapping (Bashant, Col. 8 Li. 58-65, the table interface includes an identifier matching system which utilizes an identifier received from a sending system to obtain information pertaining to other storage systems where the treated or referenced data element is also stored).

With respect to claim 7, Bashant in view of Russell and AAPA teaches the method according to claim 1, further comprising:

selecting an object utilizing an identifier in any said relevant system (Bashant, Col. 6 Li. 27-44, the identifier informs the hub system of the precise data element that was treated).

With respect to claim 12, Bashant in view of Russell and AAPA teaches the method according to claim 1, further comprising:

deleting an object by deleting the object in all relevant systems (Bashant, Col. 12 Li. 4-12, the instruction will be forwarded so that the other storage systems can likewise delete the data element).

With respect to claim 13, Bashant in view of Russell and AAPA teaches the method according to claim 12, further comprising:

deleting an object by deleting a defined object in each system (Bashant, Col. 12 Li. 4-12, the instruction will be forwarded so that the other storage systems can likewise delete the data element).

With respect to claim 14, Bashant in view of Russell and AAPA teaches the method according to claim 13, further comprising:

deleting an object by deleting object connections to a deleted object or deleted defined object (Bashant, Col. 12 Li. 67 – Col. 13 Li. 1-7, the instruction to delete a data element in a storage system can be sent to the hub system which would then delete the entry in the table).

With respect to claim 15, Bashant teaches a computer program product for retrieving and accessing data stored in a plurality of systems arranged for operating part of one or more electrical power networks, the computer program product comprising:

a computer readable medium; and

software code portions or computer code recorded on the computer readable medium to cause a computer or processor to carry out the steps of

adding a new object (Bashant, Col. 10 Li. 25-31, upon creation of a new data element in a storage system, the hub system must be informed through an instruction to the hub system) and data related to the new object into a first system (Bashant, Col. 10 Li. 31-39, the instruction relating to the new element may include a header containing information relating to the new element & Col. 10 Li. 42-45, the header information is inputted into the table),

adding a copy of the new object into a plurality of relevant systems (Bashant, Col. 10 Li. 40-49, the hub system, upon receiving an instruction to create, would create a new universal identifier for the data element and a new entry in the table & Col. 10 Li. 50-53, the instruction relating to the new element is then forwarded to other storage systems),

establishing automatically a connection between said relevant systems and the new object (Bashant, Col. 10 Li. 40-63, a new universal identifier is created in the hub system and can also be created on each storage system and each storage system must inform the hub system of how the data element is stored),

replicating data related to the new object to other systems and relevant systems (Bashant, Col. 10 Li. 50-52, the instruction relating to the new element is forwarded to storage systems for replication, this instruction may include the universal identifier and a data element type name of the new element),

establishing a consistency of accessed or retrieved data in the relevant systems mapping the new object using a model based on a structured text document (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10, the headers of the instructions provide the hub system with information to facilitate mapping between identifiers of separate storage systems and are in XML format),

checking a consistency of attributes of the accessed or retrieved data by identifying the new or a given object and/or copies of the new or a given object and comparing attributes of all copies of the same new or given object (Bashant, Col. 10 Li. 65-67 – Col. 11 Li. 1-6, when an existing data element is modified or referenced, the hub system is informed so that the other systems can be synchronized),

Bashant doesn't expressly discuss requesting data relating to a target object included in one of the systems, identifying relevant systems including data relating to the target object, and retrieving the data regarding the target object from identified relevant systems. However, it is clear that other systems may wish to access data within the system of Bashant.

Bashant and Russell are directed towards managing data that is maintained in multiple databases.

Russell teaches requesting data relating to a target object included in one of the systems (Russell, paragraph 0036 & 0045, the SCADA software serves as a middle point between the user and the systems by requesting information from the devices),

identifying relevant systems including data relating to the target object (Russell, paragraph 0045, the user may request certain data from a device and the SCADA system must retrieve it, therefore the SCADA system needs to identify what the user requested so it can be retrieved), and

retrieving the data regarding the target object from identified relevant systems (Russell, paragraph 0045, the Web page the user requested is retrieved from the device itself by the SCADA software).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant to have included requesting data relating to a target object included in one of the systems, identifying relevant systems including data relating to the target object, and retrieving the data regarding the target object from identified relevant systems because it eliminates the need for the SCADA software to track all the internal states of every device (Russell, paragraph 0045).

Bashant discusses mapping a data element based on a structured text document (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10), however, Bashant in view of Russell doesn't expressly using a model based on a structured text document.

Applicant's specification admits prior methods using a model based on a structured text document for document exchange (AAPA, Technical Background, Pg. 3

Li. 8-21, a common approach to document exchange and conversion, CIM, Common Information Model, has been developed around the use of XML based formats).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell to have included using a model based on a structured text document because it greatly facilitates the exchange and automatic conversion of documents produced by one supplier of a part of the network or an equipment for the network so that a second supplier can receive, handle, and re-use the technical data from the original documents without manual intervention, editing, or re-inputting (AAPA, Technical Background, Pg. 3 Li. 15-21).

With respect to claim 17, Bashant teaches a computer-based system for retrieving and accessing data said computer-based system comprising:

a plurality of systems storing the data (Bashant, Fig. 2, storage systems 34, 35, 36, 38, and 39),

a plurality of databases (Bashant, Col. 5 Li. 21-22, each storage system includes a database),

a data communication network and which system includes an HMI (Bashant, Col. 5 Li. 30-51, users can treat or reference data elements)

a consistency establisher configured to establish a consistency of accessed or retrieved data in the relevant systems utilizing mapping data related to a new object to be added to the data using a model based on a structured text document (Bashant, Col.

6 Li. 45-67 – Col. 7 Li. 1-10, the headers of the instructions provide the hub system with information to facilitate mapping between identifiers of separate storage systems and are in XML format, Col. 10 Li. 31-39, the instruction relating to the new element may include a header containing information relating to the new element & Col. 10 Li. 42-45, the header information is inputted into the hub system table),

one or more members for checking the consistency of attributes of any data so accessed or retrieved data by identifying the or each new or given object and/or copies of the new or given object in any separate system and comparing attributes of all such copies of the same new or given object from each of the separate systems (Bashant, Col. 10 Li. 65-67 – Col. 11 Li. 1-6, when an existing data element is modified or referenced, the hub system is informed so that the other systems can be synchronized).

Bashant doesn't expressly discuss a plurality of systems storing the data, wherein the data is arranged for operating part of one or more electrical power networks and a data communication network and which system includes an HMI providing navigation and access to at least one SCADA system and/or database as well as to any system and/or database from the list of: ERP, GIS, CMMS, WO, WMS, PM, or establishing consistency using a model based on a structured text document, a data requester configured to request data relating to a target object included in one of the systems, an identifier configured to identify relevant systems including data relating to the target object, and a data retriever configured to retrieve the data regarding the target object from identified relevant systems.

Bashant and Russell are directed towards managing data that is maintained in multiple databases.

Russell teaches a plurality of systems storing the data, wherein the data is arranged for operating part of one or more electrical power networks (Russell, paragraph 0021, a SCADA system and plurality devices, both containing databases including information relating to the other devices in the industrial equipment network).

a data communication network and which system includes an HMI providing navigation and access to at least one SCADA system and/or database (Russell, paragraph 0025, the SCADA system is connected to the Local Area Network and a HMI is located near the equipment to display the SCADA system),

a data requester configured to request data relating to a target object included in one of the systems (Russell, paragraph 0036 & 0045, the SCADA software serves as a middle point between the user and the systems by requesting information from the devices),

an identifier configured to identify relevant systems including data relating to the target object (Russell, paragraph 0045, the user may request certain data from a device and the SCADA system must retrieve it, therefore the SCADA system needs to identify what the user requested so it can be retrieved), and

a data retriever configured to retrieve the data regarding the target object from identified relevant systems (Russell, paragraph 0045, the Web page the user requested is retrieved from the device itself by the SCADA software).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant to have included a plurality of systems storing the data, wherein the data is arranged for operating part of one or more electrical power networks a data communication network and which system includes an HMI providing navigation and access to at least one SCADA system and/or database because the SCADA system requires integration and monitoring of a plurality of devices and elements in an industrial network (Russell, paragraph 0005).

Additionally, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant to have included requesting data relating to a target object included in one of the systems, identifying relevant systems including data relating to the target object, and retrieving the data regarding the target object from identified relevant systems because it eliminates the need for the SCADA software to track all the internal states of every device (Russell, paragraph 0045).

Bashant in view of Russell doesn't expressly discuss an HMI providing navigation and access to any system and/or database from the list of: ERP, GIS, CMMS,WO,WMS, PM.

AAPA teaches an HMI providing navigation and access to any system and/or database from the list of: ERP, GIS, CMMS, WO, WMS, PM (AAPA, Technical background, pg. 1, electrical networks comprising systems such as GIS and ERP).

Further, Applicant's specification admits prior methods using a model based on a structured text document for document exchange (AAPA, Technical Background, Pg. 3 Li. 8-21, a common approach to document exchange and conversion, CIM, Common Information Model, has been developed around the use of XML based formats).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell to have included an HMI providing navigation and access to any system and/or database from the list of: ERP, GIS, CMMS, WO, WMS, PM because these databases provide useful information about the SCADA system (AAPA, Technical Background, pg. 1).

Additionally, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant to have included using a model based on a structured text document because it greatly facilitates the exchange and automatic conversion of documents produced by one supplier of a part of the network or an equipment for the network so that a second supplier can receive, handle, and re-use the technical data from the original documents without manual intervention, editing, or re-inputting (AAPA, Technical Background, Pg. 3 Li. 15-21).

With respect to claim 18, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 17, further comprising:

one or members for: adding a new object (Bashant, Col. 10 Li. 25-31, upon creation of a new data element in a storage system, the hub system must be informed); automatically establishing a connection between said relevant systems and the new object (Bashant, Col. 10 Li. 40-63, a new universal identifier is created in the hub system and can also be created on each storage system and each storage system must inform the hub system of how the data element is stored); and for replicating data related to the new object to other systems and relevant systems (Bashant, Col. 10 Li. 50-52, the instruction is forwarded to storage systems for replication).

With respect to claim 19, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 18, further comprising:

one or members for: maintaining object connections (Bashant, Col. 8 Li. 37-44, the accurate maintenance of the table allows a data element to be treated or referenced by one storage system and then synchronized with other storage systems); providing connection or connections utilizing a layer with a structured text document protocol (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10, the headers of the instructions provide the hub system with information to facilitate mapping between identifiers of separate storage systems and are in XML format); and mapping the new object utilizing a structured text document model (AAPA, Technical Background, Pg. 3 Li. 8-21, a common approach to document exchange and conversion, CIM, Common Information Model, has been developed around the use of XML based formats).

With respect to claim 21, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 17, further comprising:

a virtual asset register (Bashant, Col. 8 Li. 58-65, the table interface includes an identifier matching system which utilizes an identifier received from a sending system to obtain information pertaining to other storage systems where the treated or referenced data element is also stored).

With respect to claim 22, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 21, wherein said asset register comprises a list of power network assets which list comprises in turn cross reference and mapping data for objects represented and/or stored (Bashant, Col. 8 Li. 61065, table interface includes a cross-reference system that includes a identifier matching system which utilizes an identifier to obtain information pertaining to other storage systems) in a SCADA system (Russell, paragraph 0024, SCADA system builds a spatial display of the devices and associated equipment and their interconnections).

Russell discusses a plurality of industrial equipment being monitored by the SCADA system (Russell, paragraph 0025), however, Bashant in view of Russell doesn't expressly discuss cross reference and mapping data for objects represented and/or stored in any system from the list of: GIS system, ERP system, CMMS system.

AAPA discusses that electronic power distribution networks typically comprise many and various types of distribution equipment such as a Network Information

System (NIS or GIS), an Enterprise Resource Planning system (ERP), and Supervisory Control and Data Acquisition system (SCADA) (AAPA, Technical Background, Pg. 1).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell to have included cross reference and mapping data for objects represented and/or stored in any system from the list of: GIS system, ERP system, CMMS system because the GIS system provides information about the geographical location of devices and the ERP system provides information about the maintenance history of the devices and SCADA system (AAPA, Technical Background, Pg. 1).

With respect to claim 23, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 21, wherein said asset register comprises a list of references for all objects representing individual items of physical and/or logical equipment comprised in the one or more parts of the said power network (Bashant, Col. 8 Li. 58-67 – Col. 9 Li. 1-30, the table includes keys that correspond to a particular data element stored in the storage systems).

With respect to claim 27, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 17, further comprising:

a virtual asset register implemented according to an XML or CIM model or document (Bashant, Col. 6 Li. 45-54 & Col. 10 Li. 26-38, the table is created according to XML instructions the table in the hub system receives).

With respect to claim 28, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 17, further comprising:

an HMI that may comprise object data accessed or retrieved or stored (Bashant, Col. 5 Li. 30-51, users can treat or reference a data element in a storage system) in a SCADA system and/or database (Russell, paragraph 0025, HMI is located near the equipment to configure and display the SCADA system).

Russell discusses a plurality of industrial equipment being monitored by the SCADA system (Russell, paragraph 0025), however, Bashant in view of Russell doesn't expressly discuss an HMI that may comprise as well object data originating in any system and/or database from the list of: ERP, GIS, CMMS, WO, PM.

AAPA discusses that electronic power distribution networks typically comprise many and various types of distribution equipment such as a Network Information System (NIS or GIS), an Enterprise Resource Planning system (ERP), and Supervisory Control and Data Acquisition system (SCADA) (AAPA, Technical Background, Pg. 1).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell to have included an HMI that may comprise as well object data originating in any system and/or database from the list of: ERP, GIS, CMMS, WO,

PM because the GIS system provides information about the geographical location of devices and the ERP system provides information about the maintenance history of the devices and SCADA system (AAPA, Technical Background, Pg. 1).

With respect to claim 29, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 17, further comprising:

a display comprising a human-machine interface for retrieving and accessing data stored in a plurality of systems arranged for operating part of one or more electrical power networks (Bashant, Col. 5 Li. 30-51, users can treat or reference a data element in a storage system), which HMI comprises data accessed or retrieved from or stored (Bashant, Col. 5 Li. 3-8, i/o interfaces) in a SCADA system, (Russell, paragraph 0025, HMI is located near the equipment to configure and display the SCADA system).

Russell discusses a plurality of industrial equipment being monitored by the SCADA system (Russell, paragraph 0025), however, Bashant in view of Russell doesn't expressly discuss a display including data accessed or retrieved from or stored in any from the list of: GIS system, ERP system, CMMS system, PM system, WO system.

AAPA discusses that electronic power distribution networks typically comprise many and various types of distribution equipment such as a Network Information System (NIS or GIS), an Enterprise Resource Planning system (ERP), and Supervisory Control and Data Acquisition system (SCADA) (AAPA, Technical Background, Pg. 1).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified

Bashant in view of Russell to have included a display including data accessed or retrieved from or stored in any from the list of: GIS system, ERP system, CMMS system, PM system, WO system because the GIS system provides information about the geographical location of devices and the ERP system provides information about the maintenance history of the devices and SCADA system (AAPA, Technical Background, Pg. 1).

With respect to claim 30, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 29, wherein the human-machine interface comprises at least one graphical user interface a data manipulator configured to manipulate the data retrieved from or stored (Bashant, Col. 5 Li. 30-51, users can treat or reference a data element in a storage system) in the SCADA (Russell, paragraph 0025, HMI is located near the equipment to configure and display the SCADA system) and any of the systems for GIS and/or ERP and/or CMMS (AAPA, Technical Background, Pg. 1 Li. 18-35, electronic power distribution networks typically comprise many and various types of distribution equipment such as a Network Information System (NIS or GIS), an Enterprise Resource Planning system (ERP), and Supervisory Control and Data Acquisition system (SCADA)).

With respect to claim 31, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 29, wherein said human-machine interface reads out any object property independent of source (Bashant, Col. 8 Li. 54-57, users

can keep statistics regarding the treatment of the data elements and the volume of instruction sending/receiving performed by each storage system).

With respect to claim 32, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 29, wherein the human-machine interface comprises access to simultaneous data stored in or held by any of the list of: SCADA system, GIS system, ERP system, CMMS system, PM system, WO system (Bashant, Col. 8 Li. 54-57, users can keep statistics regarding the treatment of the data elements and the volume of instruction sending/receiving performed by each storage system & Russell, paragraph 0025, HMI is located near the equipment to configure and display the SCADA system).

Claims 3-5, 8-10, 20, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashant in view of Russell and AAPA and further in view of A. DeVos et al., *XML for CIM Model Exchange*, IEEE, 2001 (referred to herein as DeVos).

With respect to claim 3, Bashant in view of Russell and AAPA teaches the method according to claim 2, further comprising:

mapping the new object and/or copies of the new object (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10, the headers of the instructions provide the hub system with information to facilitate mapping between identifiers of separate storage systems and are in XML format).

AAPA discusses the use of CIM/XML for document exchange, however, Bashant in view of Russell and AAPA doesn't expressly discuss mapping using a model based on a CIM/XML document.

Bashant in view of Russell and AAPA and DeVos are directed towards exchanging information between storage devices. DeVos teaches a method of using a Common Information Model (CIM) with the Resource Description Framework (RDF) which describes graphs in XML (DeVos, Pg. 33 Part F, 1st paragraph).

DeVos teaches mapping using a model based on a CIM/XML document (DeVos, Pg. 34, section IV, 3rd paragraph, the CIM names each class, its attributes and relationships, creating a common data dictionary that facilitates system and application integration in the EMS industry & Fig. 7, converting CIM model to CIM RDF data model & Pg. 35, part B, the resulting CIM/XML model exchange document can be parsed and information imported into a foreign system).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell and AAPA to have included mapping using a model based on a CIM/XML document because the CIM facilitates the interoperation of electric utility software from independent sources (DeVos, Pg. 31, section I, 4th paragraph) and XML provides the tools and libraries for particular applications (DeVos, Pg. 32, section II).

With respect to claim 4, Bashant in view of Russell and AAPA teaches the method according to claim 2, further comprising:

mapping attributes of the new object and/or copies of the new object (Bashant, Col. 6 Li. 45-67 – Col. 7 Li. 1-10, the headers of the instructions provide the hub system with information to facilitate mapping between identifiers of separate storage systems and are in XML format).

AAPA discusses the use of CIM/XML for document exchange, however, Bashant in view of Russell and AAPA doesn't expressly discuss mapping using a model based on a CIM/XML document.

Bashant in view of Russell and AAPA and DeVos are directed towards exchanging information between storage devices. DeVos teaches a method of using a Common Information Model (CIM) with the Resource Description Framework (RDF) which describes graphs in XML (DeVos, Pg. 33 Part F, 1st paragraph).

DeVos teaches mapping using a model based on a CIM/XML document (DeVos, Pg. 34, section IV, 3rd paragraph, the CIM names each class, its attributes and relationships, creating a common data dictionary that facilitates system and application integration in the EMS industry & Fig. 7, converting CIM model to CIM RDF data model & Pg. 35, part B, the resulting CIM/XML model exchange document can be parsed and information imported into a foreign system).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell and AAPA to have included mapping using a model based on a CIM/XML document because the CIM facilitates the interoperation of electric utility

software from independent sources (DeVos, Pg. 31, section I, 4th paragraph) and XML provides the tools and libraries for particular applications (DeVos, Pg. 32, section II).

With respect to claim 5, Bashant in view of Russell and AAPA teaches the method according to claim 1, further comprising:

establishing the automatic connection or connections between copies of the same object in different systems (Bashant, Col. 10 Li. 50-63, the storage systems informs the hub system how the data element is stored so that the element in the table can be updated).

AAPA discusses the use of CIM/XML for document exchange, however, Bashant in view of Russell and AAPA doesn't expressly discuss establishing the automatic connection or connections utilizing a CIM/XML layer.

Bashant in view of Russell and AAPA and DeVos are directed towards exchanging information between storage devices. DeVos teaches a method of using a Common Information Model (CIM) with the Resource Description Framework (RDF) which describes graphs in XML (DeVos, Pg. 33 Part F, 1st paragraph).

DeVos teaches establishing the automatic connection or connections utilizing a CIM/XML layer (DeVos, Pg. 35, part B, a power system model can be converted to an XML document, referred to as a CIM XML document where the document can be parsed an the information imported in to a foreign system).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified

Bashant in view of Russell and AAPA to have included establishing the automatic connection or connections utilizing a CIM/XML layer because the CIM facilitates the interoperation of electric utility software from independent sources (DeVos, Pg. 31, section I, 4th paragraph) and XML provides the tools and libraries for particular applications (DeVos, Pg. 32, section II).

With respect to claim 8, Bashant in view of Russell and AAPA teaches the method according to claim 7, as discussed above. The identifiers discussed in Bashant are defined a unique value, symbol, or combination thereof (Bashant, Col. 4 Li. 15-20). Therefore, Bashant in view of Russell and AAPA doesn't expressly discuss a method wherein the identifier may be a Uniform Resource Identifier compatible as an identifier with a standard for Resource Description Framework.

Bashant in view of Russell and AAPA and DeVos are directed towards exchanging information between storage devices. DeVos teaches a method of using a Common Information Model (CIM) with the Resource Description Framework (RDF) which describes graphs in XML (DeVos, Pg. 33 Part F, 1st paragraph).

DeVos teaches a method wherein the identifier may be a Uniform Resource Identifier compatible as an identifier with a standard for Resource Description Framework (DeVos, Pg. 33, part F, 3rd paragraph, in the RDF model, a Uniform Resource Identifier is used to designate a resource).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified

Bashant in view of Russell and AAPA to have included a method wherein the identifier may be a Uniform Resource Identifier compatible as an identifier with a standard for Resource Description Framework because the URI is a standard used to identify resources in the RDF model and the RDF model addresses the problem of representing entities and relationships, such as directed labeled graphs, in XML (DeVos, Pg. 33, part F, 1st and 3rd paragraphs).

With respect to claim 9, Bashant in view of Russell, AAPA and DeVos teaches the method according to claim 4, further comprising:

accessing one or more object attributes of the new object and changing an object attribute of the new object in a source system (Bashant, Col. 10 Li. 65-67 – Col. 11 Li. 1-6, when an existing data element is modified or referenced, the hub system is informed so that the other systems can be synchronized).

With respect to claim 10, Bashant in view of Russell, AAPA and DeVos teaches the method according to claim 4, further comprising:

updating an object attribute of the new object in the source (Bashant, Col. 10 Li. 65-67 – Col. 11 Li. 1-6, when an existing data element is modified or referenced, the hub system is informed so that the other systems can be synchronized).

With respect to claim 20, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 19, as discussed above. AAPA discusses

the use of CIM/XML for document exchange, however, Bashant in view of Russell and AAPA doesn't expressly discuss a method wherein the structured text document protocol layer, or the structured text document for mapping the new object are implemented with a CIM/XML model.

Bashant in view of Russell and AAPA and DeVos are directed towards exchanging information between storage devices. DeVos teaches a method of using a Common Information Model (CIM) with the Resource Description Framework (RDF) which describes graphs in XML (DeVos, Pg. 33 Part F, 1st paragraph).

DeVos teaches a method wherein the structured text document protocol layer, or the structured text document for mapping the new object are implemented with a CIM/XML model (DeVos, Pg. 34, section IV, 3rd paragraph, the CIM names each class, its attributes and relationships, creating a common data dictionary that facilitates system and application integration in the EMS industry & Fig. 7, converting CIM model to CIM RDF data model & Pg. 35, part B, the resulting CIM/XML model exchange document can be parsed and information imported into a foreign system).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell and AAPA to have included a method wherein the structured text document protocol layer, or the structured text document for mapping the new object are implemented with a CIM/XML model because the CIM facilitates the interoperation of electric utility software from independent sources (DeVos, Pg. 31,

section I, 4th paragraph) and XML provides the tools and libraries for particular applications (DeVos, Pg. 32, section II).

With respect to claim 24, Bashant in view of Russell and AAPA teaches the computer-based system according to claim 23, as discussed above. The list of references in Bashant is created according to XML instructions the table in the hub system receives (Bashant, Col. 6 Li. 45-54 & Col. 10 Li. 26-38). Therefore Bashant in view of Russell and AAPA doesn't expressly discuss a method wherein the list comprises a master list of all objects in the one or more parts of the said power network together with the mapping data for each object according to a CIM model.

Bashant in view of Russell and AAPA and DeVos are directed towards exchanging information between storage devices. DeVos teaches a method of using a Common Information Model (CIM) with the Resource Description Framework (RDF) which describes graphs in XML (DeVos, Pg. 33 Part F, 1st paragraph).

DeVos teaches a method wherein the list comprises a master list of all objects in the one or more parts of the said power network together with the mapping data for each object according to a CIM model (DeVos, Pg. 34, section IV, 3rd and 4th paragraphs, the CIM names each class, its attributes and relationships, creating a common data dictionary).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashant in view of Russell and AAPA to have included a method wherein the list

comprises a master list of all objects in the one or more parts of the said power network together with the mapping data for each object according to a CIM model because the CIM model provides a comprehensive, logical view of energy management system information (DeVos, Pg. 34, section IV, 2nd paragraph).

With respect to claim 25, Bashant in view of Russell, AAPA and DeVos teaches the computer-based system according to claim 24, wherein object data for the objects comprised in the master list of the asset register is stored in at least one separate system (Bashant, Col. 8 Li. 58-67 – Col. 9 Li. 1-30, the table includes keys that correspond to a particular data element stored in the storage systems including any of a system for: SCADA, GIS, CMMS, ERP, PM, WO (AAPA, Technical Background, Pg. 1 Li. 18-35, electronic power distribution networks typically comprise many and various types of distribution equipment such as a Network Information System (NIS or GIS), an Enterprise Resource Planning system (ERP), and Supervisory Control and Data Acquisition system (SCADA)).

With respect to claim 26, Bashant in view of Russell, AAPA and DeVos teaches the computer-based system according to claim 24, wherein the asset register is a virtual asset register, which does not comprise any object data for the objects comprised in the master list and comprises only link information or cross reference data or mapping data (Bashant, Fig. 3, table interface and table containing only system info and record references).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bashant in view of Russell and AAPA as applied to claim 1 above, and further in view of Hamsa (US 6,564,201).

With respect to claim 11, Bashant in view of Russell and AAPA teaches the method according to claim 1, as discussed above. Bashnat discusses creating a new element where each element is defined as a specific set of data (Bashant, Col. 4 Li. 13). However, Bashant in view of Russell and AAPA doesn't expressly discuss creating the new object in each relevant system based on object templates.

Bashant in view of Russell and AAPA and Hamsa are directed towards the integration of many systems.

Hamsa teaches creating the new object in each relevant system based on object templates (Hamsa, Col. 5 Li. 1-4, each object is the instance of a class, which provides a template for the object).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified Bashnat in view of Russell and AAPA to have included creating the new object in each relevant system based on object templates because class templates create objects having the same fields but where each object can have different information in those fields (Hamsa, Col. 5 Li. 5-9).

Response to Amendment

Rejection of claims 17-32 under 35 U.S.C. 101

With regard to claims 17-32, the amendments to the claims have overcome the 35 U.S.C. 101 rejection. The Examiner withdraws the 35 U.S.C. 101 rejection to claims 17-32.

Response to Arguments

Objection to the Specification

Applicant has pointed to pg. 5 line 31 through pg. 6 line 10 and pg. 18 line 15 through pg. 20 line 18 for support for the term “computer program product.” Therefore, the Examiner withdraws the objection to the specification.

Rejection of claim 15 under 35 U.S.C. 101

Applicant's arguments, see pg. 11, with respect to claim 15, have been fully considered and are persuasive. The 35 U.S.C. 101 of claim 15 has been withdrawn.

Rejection of claims 1, 2, 6, 7, 12-15, 17-19, 21-23, and 27-32 under 35 U.S.C. 103

Applicant's arguments, see pg. 12-13 with respect to claims 1, 15, and 17, have been fully considered.

Some of the arguments are persuasive and the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Russell et al. (US 2004/0260404).

Applicant argues in substance that Bashant in view of AAPA doesn't expressly discuss adding a new object and data related to the new object into a first system. The Examiner respectfully disagrees. Applicant is reminded that the Examiner is required to give the claims their broadest reasonable interpretation. Bashant discusses adding a data element into a hub system (Col. 10 Li. 26-28). To do this, an instruction is sent to the hub system, where the instruction contains a header comprising information relating to the data element, such as an identifier for the system creating the element, identifiers pertaining to the location of the element within the original system, and a data element type name (Col. 10 Li. 29-39). This information is then inputted into the table (Col. 10 Li. 42-45). Therefore, Bashant teaches adding a new object and data related to the new object into a first system.

Applicant also argues that Bashant discusses replicating the same data among the storage systems, whereas the claimed invention deals with data that is not identical and data that originates in different elements of an electric power network. Bashant does discuss adding new information into the system. An application storage system may create a new element for a new customer and submit it to the hub system for distribution to the other systems (Col. 10 Li. 26-31). With respect to identical data, it is unclear what this argument is directed towards since there is no mention in the claims of whether or not data is identical. Bashant does replicate data onto other systems, but so does the claimed invention. Bashant doesn't replicate the data onto *every* system though, just relevant systems (Col. 8 Li. 1-10).

Rejection of claims 3-5, 8-11, 20, and 24-26 under 35 U.S.C. 103

Applicant's arguments with respect to claim 3-5, 8-11, 20, and 24-26 have been considered but are moot in view of the new ground(s) of rejection. The previous references, A. DeVos et al., *XML for CIM Model Exchange*, IEEE, 2001 (referred to herein as DeVos) and Hamsa (US 6,564,201), were used in the new grounds of rejection for limitations not argued in Applicant's response, so they will not be addressed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brittany N. McCue whose telephone number is (571)270-3566. The examiner can normally be reached on Mon-Thu 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571)272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. N. M./
Examiner, Art Unit 2169
7-1-09

/Tony Mahmoudi/
Supervisory Patent Examiner, Art Unit 2169